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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,492	08/23/2005	Helmut Christian Eder	COCH-0144-US1	7344

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EXAMINER
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CHAN, RICHARD

ART UNIT	PAPER NUMBER
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2618

DATE MAILED: 09/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/526,492

**Applicant(s)**

EDER ET AL.

**Examiner**

Richard Chan

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/4/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Seligman (US 6,151,400).

With respect to claim 1, Seligman discloses the method of measurement of an evoked neural response comprising the steps of: obtaining a sensed signal representing the evoked neural response from a sensor **10**; passing the obtained sensed signal to a signal input of a high gain amplifier **11**; and altering a reference voltage of the high gain amplifier in order to prevent the high gain amplifier saturating with variations of the sensed signal **Fig.1 and Fig. 5 and (Col.3 lines 15-21)**.

With respect to claim 2, Seligman discloses the method according to claim 1 wherein the step of altering the reference voltage is performed during the measurement of the evoked neural response. **(Col.3 lines 4-11)**

With respect to claim 3, Seligman discloses the method according to claim 1 wherein the step of altering the reference voltage is performed by setting the reference

voltage equal to a present value of the sensed signal. **(Col.1 lines 22-37)**

With respect to claim 4, Seligman discloses the method according to claim 3 wherein the setting of the reference voltage equal to a present value of the sensed signal is undertaken by a sample-and-hold circuit **17** having an input from the sensed signal. **(Col.2 lines 40-52)**

With respect to claim 5, Seligman discloses the method according to claim 3 further comprising the step of setting the reference voltage of the high gain amplifier equal to the present value of the sensed signal at the commencement of every sample period. **(Col.3 line 4-11)**

With respect to claim 6, Seligman discloses the method according to claim 6 further comprising the step of integrating samples, with integrator **12** derived at the output of the high gain amplifier to obtain a continuous waveform representing the amplified sensed signal.

With respect to claim 7, Seligman discloses the method according to claim 1 wherein the step of obtaining the sensed signal comprises obtaining a sensed signal of the neural response of an auditory nerve. **(Col.2 lines 40-52)**

With respect to claim 8, Seligman discloses the method according to claim 7 wherein the step of obtaining the sensed signal of the neural response of the auditory nerve uses one or more electrodes of an electrode array of a cochlear implant. **Claim 7.**

With respect to claim 9, Seligman discloses the device for measuring an evoked neural response, the device comprising: a sensor **10** for obtaining a sensed signal representing the evoked neural response; a high gain amplifier **11** having a signal input for receiving the sensed signal, and having a reference input; and means for altering a reference voltage at the reference input of the high gain amplifier in order to prevent the high gain amplifier saturating with variations of the sensed signal. **Fig. 5 and (Col.3 lines 15-21).**

With respect to claim 10, Seligman discloses the device according to claim 9 wherein the reference voltage is altered during the measurement of the evoked neural response. **(Col.3 lines 4-11)**

With respect to claim 11, Seligman discloses the device according to claim 10 wherein the reference voltage is altered by setting the reference voltage equal to a present value of the sensed signal. **(Col.1 lines 22-37)**

With respect to claim 12, Seligman discloses the device according to claim 11 further comprising a sample-and-hold circuit **17** having an input from the sensed signal,

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said sample-and-hold circuit setting of the reference voltage equal to a present value of the sensed signal. **(Col.2 lines 40-52)**

With respect to claim 13, Seligman discloses the device according to claim 12 wherein the reference voltage of the high gain amplifier is set equal to the present value of the sensed signal at the commencement of every sample period. **(Col.3 line 4-11)**

With respect to claim 14, Seligman discloses, the device according to claim 13 wherein samples derived at the output of the high gain amplifier are integrated by integrator 12 to obtain a continuous waveform representing the amplified sensed signal. **(Col.2 lines 54-65)**

With respect to claim 15, Seligman discloses the device according to claim 9 wherein the obtained sensed signal is of the neural response of an auditory nerve. **(Col.3 lines 4-11)**

With respect to claim 16, Seligman discloses the device according to claim 15 wherein the sensor comprising one or more electrodes of an electrode array of an implanted portion of a cochlear implant for obtaining the sensed signal. **Claim 7**

With respect to claim 17, Seligman discloses the device according to claim 9 comprising a cochlear implant. **Claim 7**

With respect to claim 18, Seligman discloses the method of measurement of an evoked neural response comprising the steps of: obtaining a sensed signal representing the evoked neural response from a sensor **10**; passing the obtained sensed signal to a signal input of a high gain amplifier **11**; and setting a reference voltage of the high gain amplifier equal to a present value of the sensed signal in order to prevent the high gain amplifier saturating with variations of the sensed signal. **Fig.1 and Fig. 5 and (Col.3 lines 15-21).**

With respect to claim 19, Seligman discloses the device for measuring an evoked neural response, the device comprising: a sensor **10** for obtaining a sensed signal representing the evoked neural response; a high gain amplifier **11** having a signal input for receiving the sensed signal, and having a reference input; and means for setting a reference voltage at the reference input of the high gain amplifier equal to a present value of the sensed signal in order to prevent the high gain amplifier saturating with variations of the sensed signal. **Fig.1 and Fig. 5 and (Col.3 lines 15-21).**

### ***Conclusion***

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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The Mead reference (US 6,044,162) discloses a digital hearing aid using differential signal representations.


The Eklund reference (US 6,035,001) discloses a method and arrangement in a transmission system.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Chan whose telephone number is (571) 272-0570. The examiner can normally be reached on Mon - Fri (9AM - 5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571)272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Richard Chan

 9/15/06  
QUOCHIE B. VUONG  
PRIMARY EXAMINER